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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/842,549	04/25/2001	Richard L. Baer	10003419	7608

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EXAMINER

QUIETT, CARRAMAH J

ART UNIT	PAPER NUMBER
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2612

DATE MAILED: 11/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/842,549	BAER, RICHARD L.	
	Examiner	Art Unit	
	Carramah J. Quiett	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 07/30/2004 has been entered.

Response to Amendment

2. The amendments, filed on 07/30/2004, have been entered and made of record. Claims 1-12 are pending.

Response to Arguments

3. Applicant's arguments filed 07/30/2004 have been fully considered but they are not persuasive.

With respect to the Bell et al. (U.S. Pat. #6,486,915) reference, the Applicant argues that Bell, does not determine a selected exposure in response to the number of clipped pixels in obtained photographs as claimed in amended claim 1. The Applicant also argues that Bell does not teach obtaining a photograph of an image scene for each of a set of possible exposures as claimed in amended claim 1. The Examiner respectfully disagrees to both arguments. In col. 7, lines 58-col. 8, line 1, Bell teaches that by replacing the aim mean with a dynamic aim mean, which is a noise dependent variable that is computed for each captured scene. This dynamic aim mean is computed as a function of each exposure setting. Moreover, the dynamic aim mean is used to define the noise of the pixels as a function of different exposures (col. 8, lines 1-67). An

example of this relationship is analyzed in figures 8 and 9. Please be aware that this example is a linear representation. These relationships can also be represented in a higher order.

Claims 2-4 depend on amended claim 1. Therefore, claims 2-4 are anticipated by Bell.

Amended claim 5 is ~~also~~ anticipated by Bell. Amended claim 5 includes limitations similar to the limitations of amended claim 1. Therefore, the response stated above, with respect to amended claim 1, also apply to amended claim 5.

Claims 6-8 depend on amended claim 5. Therefore, claims 6-8 are anticipated by Bell.

Further, with respect to the Bell et al. (U.S. Pat. #6,486,915) reference, Applicant argues that claim 9 is not anticipated by Bell. The Applicant argues that Bell does not have a image processor that determines a selected exposure based on the number of clipped pixels obtained for each possible exposure. Bell teaches that the aim mean in the exposure control block can be replace with a dynamic aim mean, which is a noise dependent variable that is computed for each captured scene. This dynamic aim mean is computed as a function of each exposure setting. Moreover, the dynamic aim mean is used to define the noise of the pixels as a function of different exposures (col. 8, lines 1-67). An example of this relationship is analyzed in figures 8 and 9. Please be aware that this example is a linear representation. These relationships can also be represented in a higher order.

Claims 10-12 depend on amended claim 9. Therefore, claims 10-12 are anticipated by Bell.

Claim Rejections - 35 USC § 102

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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5. Claims 1-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Bell et al. (US #6,486,915).

Claims 5-8 will be discussed first. Regarding claim 5, Bell '915 teaches an apparatus for exposure control, comprising:

means for obtaining a photograph of an image scene for each of a set of possible exposures (see Figs. 1 and 3; col. 2 lines 47-55; col. 3 lines 8-15, 49-63; col. 7, lines 58 – col. 8, line 1);

means for determining a number of clipped pixels in each photograph (figs. 4-6; col. 1, lines 61-65; col. 4 line 48 - col. 5, line 65);

means for determining a selected exposure from the possible exposures in response to the numbers of clipped pixels such that the photographs obtained using the possible exposures higher than the selected exposure have an increased value for the number (col. 5 lines 3-42; col. 5 line 66-col. 6 line 11; col. 6 line 57-col. 7 line 57; col. 7, lines 58–col. 8, line 1; figs. 8-9), and the photographs obtained using the possible exposures less than the selected exposure do not have a substantially lower value for the number (col. 5 lines 43-65, col. 6 lines 12-20', col. 6 line 57 - col. 7 line 57).

As to claim 6, Bell teaches that the means for determining a number of clipped pixels comprises means for measuring an amplitude of each of a set of pixels in the corresponding photograph (col. 3 lines 49-63; col. 5 lines 3-22; col. 4 line 48 - col. 5 line 10); means for generating a histogram of a number of the pixels from the corresponding photograph verses the corresponding amplitude (Figs. 4-6., col. 5 line 10 - col. 6 line 57,' col. 7 lines 12-57); means for detecting a jump in the number of pixels at a high pixel amplitude (Figs. 4-6; col. 5 lines 15-22; col. 6 lines 11-20; col. 7 lines 38-57).

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As to claim 7, Bell teaches the means for determining a number of clipped pixels comprises means for setting a starting exposure and determining the number of clipped pixels from the corresponding photograph for the starting exposure (col. 1 line 66 - col. 2 line 4); means for setting a series of increased exposures and determining the number of clipped pixels from the corresponding photographs for the increased exposures (col. 1 line 57 - col. 2 line 12; col. 6 lines 11-56); means for setting a series of decreased exposures and determining the number of clipped pixels from the corresponding photographs for the decreased exposures (col. 6 lines 57 - col. 7 line 52).

As to claim 8, Bell teaches the means for determining a selected exposure comprises means for determining a subset of the possible exposures for which the number is relatively unchanged (col. 6 lines 1 1-56); and means for determining a first one of the possible exposures higher than the subset for which the number increases (col. 6 line 45 - col. 8 line 26).

Regarding claims 1-4, claims 1-4 are method claims corresponding to the apparatus claims 5-8, respectively. Therefore, claims 1-4 are analyzed and rejected as previously discussed with respect to claims 5-8.

Regarding claim 9, Bell teaches a digital camera (see Fig. 1), comprising:
image sensor (photo cells 1287);
exposure mechanism that provides a set of possible exposures to the image sensor from an image scene (automatic exposure control 128);
image processor (processors 116-124, A/D 120, image buffer 126 and exposure control 128) that obtains a photograph of an image scene for each of a set of possible exposures (see Figs. 1 and 3, col.2, lines 47-55; col. 3, lines 8-15, 49-63), and determines a number of clipped pixels in each

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photograph (Figs. 4-6, col. 1 lines 61-65; col. 4 line 48 - col. 5 line 65), and determines a selected exposure from the possible exposures such that the photographs obtained using the possible exposures higher than the selected exposure have an increased value for the number (col. 5 lines 3-42; col. 5 line 66 - col. 6 line 11; col. 6 line 57 - col. 7 line 57), and the photographs obtained using the possible exposures less than the selected exposure do not have a substantially lower value for the number (col. 5 lines 43-65; col. 6 lines 12-20; col. 6 line 57 - col. 7 line 57).

As to claim 10, see the Examiner's comments regarding claim 6.

As to claim 11, see the Examiner's comments regarding claim 7.

As to claim 12, see the Examiner's comments regarding claim 8.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carramah J. Quiett whose telephone number is (703) 305-0566. The examiner can normally be reached on 8:00-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on (703) 305-4929. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

C.J.Q.
Nov. 15, 2004



NGOC-YEN VU
PRIMARY EXAMINER